InterspecieS

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Over the past few years the Interspecies website (interspecies.com) has germinated a vibrant international network of whale aficionados, scientists, environmentalists, and artists, discussing such varied subjects as whale behavior, interspecies communication, earth art, visionary eco-politics, and the genuine promise of animal language. Please check out our site again, since it has recently been overhauled to include audio of whale calls. It also includes this newsletter in .pdf format for easy downloading and printing. Something is working, since we seem to be getting lots of traffic on the site every day.

Please send your email address to beluga@rockisland.com if you'd like to receive the "Interspecies Occasional Email Newsletter".

—Jim Nollman

Reinhabitation

The gray is perhaps the most ancient species of great whale, designated "a living fossil" by researchers because of its unformed baleen plates and the lack of a dorsal fin. Yet in terms of interspecies behavior, the gray seems to reflect human beings more closely than any other cetaceans species. They dote on our attention, and seem as fascinated to both observe and make physical contact with humans, as we humans are distracted to do the same thing with them. Whalewatching operators in the lagoons of Baja consistently report the species venturing close to rub their heads against the sides of boats. In fact, grays are the only cetacean that regularly allow human beings to pet them. Ironically, dolphins are commonly accorded the status of friendliest cetacean, yet they rarely permit humans the gift of touch despite the fact that in the Bahamas and Hawaii people have been swimming with the same pods for years. In one well-documented petting encounter with grays, an animal became so frisky that it rose underneath the boat, lifting the human occupants into the air like a waiter lifting a platter onto his shoulder. Unfortunately the friendly gesture went awry, and when the boat tipped, everyone on board fell headlong into the water. Tragically, one man died of a heart seizure.

Old time whalers used to refer to this same friendly, but over-exuberant creature as the "Devil Fish".

Also reflecting human behavior, the species fought violence with violence, and historically, the gray was the only great whale to consistently attack the long boats when harpooned.

Gray whales once migrated down both coasts of the north Pacific Ocean, although the Asian group eventually fell prey to shore whaling by the Japanese and Koreans. A relict population still hangs on to existence off the coast of Siberia, although it is now losing out to oil exploration.

Less well known is the fact that grays were once a common sight on both sides of the Atlantic Ocean. "How long ago was it?" asks Farley Mowat in *Sea of Slaughter*, a landmark account of the mass extinction of Atlantic sea life at the hands of humankind. In the mid-1800's, a few years before the Pacific population of grays was first encountered off the coast of Baja, the bones of an unknown species of baleen whale were dug up in Sweden. Biologists couldn't identify the bones, so they labeled it a prehistoric whale. Much later, historian's discovered that the Basques had a long history of taking a whale species they referred to as the otta sotta. The population was extinguished from the coast of Europe sometime in the mid-1700s.

Along the American east coast, several native tribes described a species which was clearly a gray whale. That so many indigenous people gave this whale a name is a testament to the fact that it traveled close to shore, a behavior typical of gray whales. The Algonquin people named it powdaree.

New England whalers called it the scrag whale. During the species' northern migration of 1669, Samuel Mavericke noted that the species was so abundant in Southhampton Harbor on New York's Long Island, that several could be viewed every day. But the hunt for them was unrelenting. By 1725 the *powdaree* was extinct along the American east coast.

Farley Mowat grants the Atlantic Gray the tragic distinction of being "the first major extinction to be perpetrated by western man in North America...the first of many.

Human Ignorance

The social behavior of the gray whale makes it especially vulnerable to the excesses of whaling. While most great whale species are relatively difficult to locate because they roam ocean currents far from land, the entire Eastern Pacific (or western North American) stock of grays migrates within twenty miles of shore. And they over-winter in just a few clement lagoons in Baja California. Two times in the past hundred and fifty years, this population was brought to the brink of extinction.

The first slaughter occurred during the so-called golden age of whaling. On a tip from a Chinese pilot, the American, Joseph Scammon, learned that gray whales congregate in a shallow Baja lagoon, now bearing his name. His ship traveled there, anchored in protected water, set up a "try works" on shore, and methodically started killing them. Within a few more years, other whalers had joined him, killing hundreds of whales within rowing distance of the rendering plant. These whalers turned away from Baja just thirty years later, having devastated this population to the point of commercial extinction. Jacques Cousteau estimated their numbers in the 1880s to be no more than 160 individuals.

Unique in the annals of whaling, the eastern Pacific gray population recovered, and was hunted a second time, until the population crashed once again in the 1930s. According to a study by Grzimek, there were probably no more than 250 gray whales still migrating down the California coast in 1937. Yet the last American gray whaling station, located near San Francisco, was only shut down in the early 1960's. By then, most biologists considered the gray whale migration gone forever. But the population recovered a second time. Just a mere twenty years passed from the time the slaughter ended until gray whale watching developed into a major form of tourism along the Pacific coast of North America. In 1968 Grzimek estimated their numbers to have rebounded to a remarkable 19,000 animals.

Looking for Home

As the species' numbers have grown, the grays are more frequently sighted in formerly unvisited harbors along the coast including Bodega Bay, Coos Bay, Puget Sound, and Tofino. Whale scientists interpret these inshore sightings as a form of cetacean house-hunting; whales investigating alternatives to their long yearly Arctic to Baja sojourn. Long ago, before whaling diminished the population, the grays were known to frequent the inland waters of San Francisco, San Diego, and Puget Sound. Because humankind has not yet learned to keep its own nest clean, the gray whale's habitat expansion into human-populated areas poses mortal problems for a creature who feeds on worms and shellfish by sifting mud through its baleen. Today, many gray whales entering industrial sumps like Puget Sound end up stranding, ostensibly poisoned by the toxins in the mud.

Grays face other dangers as well. In 1982 a whale stopped to linger in the bay of Tofino along the west coast of Vancouver island.

Having already learned to interact with affectionate whalewatchers in Baja, this whale immediately ran its rostrum against any boat that drew close. But not everyone in Tofino was a whale lover. One man placed his dog on the whale's back. The dog bit the whale, the whale dived. When it surfaced again, the man drove his outboard over the animal inflicting a deep wound. The whale vanished. One might only hope the luckless creature survived long enough to alert his migrating community to avoid the greeting that awaits them in Tofino.

Dispensing with Dispensation

This thumbnail history of the grays relations with human beings inevitably concludes with a word about the Makah tribe of Neah Bay Washington. After the grays were taken off the endangered species list in 1996, the International Whaling Commission (IWC) granted the Makah tribe of Neah Bay Washington a coveted "aboriginal dispensation" to mount their own gray whale hunt.

Tribal promoters argued that whaling has always been an integral part of Makah culture. They consumed several species, especially humpbacks, although one tribal elder pronounced the minke whale the tastiest of all. Environmentalists countered that the tribe has not whaled in nearly eighty years; that today the Makah work primarily as loggers and fishermen, and by no stretch of the imagination can their culture be called "subsistence".

A few years ago some tribesmen accidentally caught a gray whale in their fishing nets. They butchered the animal but, by their own reckoning, no one could stomach the foul-tasting flesh. This jibes well with the anecodotal verdict Jim Nollman once heard voiced by an Inupiat whaler in Barrow. He said that gray whale flesh is inedible because, "it smells like shit".

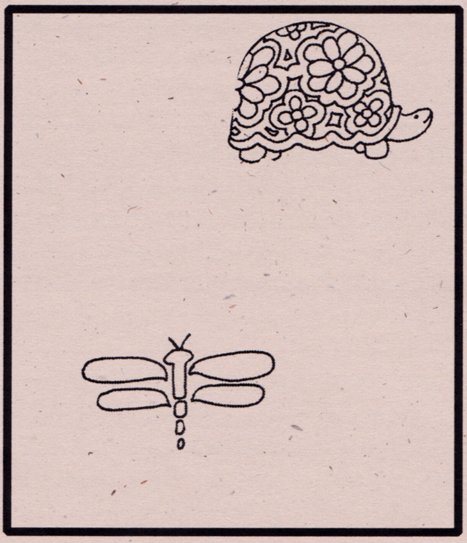
Palatability may not be an issue, however, because Makah whaling is not actually an issue of subsistence, but of tribal sovereignty—kill a whale, feel like a real makah man.

The Makah have defended their right to whale, arguing that whether they eat the meat or not, killing four animals a year will not harm the thriving gray whale population. Critics insist that the real issue is not the small number permitted, but the precedent it sets. The Makah's permit has already triggered others tribes along the Pacific Coast to announce their own whaling revival.

Far more worrisome to environmentalists is that some of the specialized hardware and expertise needed to mount a hunt has been pledged to the Makah by the Japanese Whaling industry which seeks political allies in the IWC.

For all these reasons, a few Makah leaders have joined environmentalists to publicly decry the hunt. Tribal elder Alberta Thompson has described the authentic possibility of a friendly gray whale swimming up to a Makah boat seeking a caress, and being greeted instead by an exploding harpoon in its gut. The Makah did kill one whale in 2000, although thankfully, their expression of tribal sovereignty has been shut down by the courts.

Let this verdict prevail forever.



May I Introduce to You?

The above thumbnail history of gray whale/human relations, has been sketched in here to provide a context for a proposal recently received by Interspecies.com from the French historian and whale activist, Andreas Guyot. His paper proposes the reintroduction of gray whales into the Atlantic Ocean. To quote the opening passage which displays the proposals romantic eco-fervor: "This project, which might look ambitious, would be a rightful return of this whale into an ocean where it has lived since the beginning of time and also a compensation for the follies of man."

Guyot concludes that the only reason the gray has survived in the Pacific is that hunting commenced there so much later than in the north Atlantic. Some historians of whaling, speculate rather stunningly that the Basques were already hunting whales in Newfoundland as early as the 1420s, whereas Pacific gray whaling did not start until 1851.

There is no doubt that the gray could survive and thrive in Atlantic water because it did so for eons, and would be living there today if humans had not hunted to extinction by the mid-eighteenth century. Guyot proposes that if 200 animals could be transported into the north Atlantic via the Panama Canal, a viable population on both sides of the Atlantic could be attained within the next hundred years. He grants that moving 200 whales at once is an insuperable undertaking. But moving 20 or so per year, which allows the necessary time for a close observation of their acclimation process, is eminently doable.

Engineering

And how would this momentous engineering task be attained? Guyot proposes "adapted barges" brought to the Sea of Cortes in winter. He quotes the oldtime whaler, Joseph Scammon, to demonstrate that grays could likely be gathered up as they commonly lie on the seabed in “sixty or eighty centimeters of water.

And how to deal with the formidable human politics presented by such a venture? Guyot notes that the International Whaling Commission presently oversees an exemption that allows aboriginal people to kill 140 gray whales each year. If one adds in the estimated fifteen killed by “scientific whaling”, a potential of 165 grays are being killed each year. Guyot suggests we simply curtail those violent exemptions for a single year, and catch the whales instead.

The result will be an utter miracle of human kindness and farsighted protection, two qualities our own species seems in short supply of during these days of prevailing warfare and worldwide eco-catastrophe.

The gray will have to find new bearings, new bays for breeding, new sources of food in the currents off Florida and Labrador, and Norway and perhaps the Mediterranean. But as Guyot concludes, “nothing, stands in the way of our saving 20 whales a year from certain death, in order to give them a new chance of survival in the Atlantic Ocean.”

Cetacean Petroglyphs

New evidence from South Korea suggests Stone-Age people may have started hunting whales as early as 6,000 B.C. Analysis of rock carvings at Bangu-Dae archaeological site in the southeast of the country has revealed more than 46 depictions of large whales.

The carvings also show evidence humans used harpoons, floats and lines to catch to catch sperm whales, right whales and humpbacks. Other species represented include killer whales, minke whales and dolphins. One image shows people standing in a curved boat connected via a line to a whale.

The petroglyphs, were made between 6,000 and 1,000 B.C., said researchers at the Museum of Kyungpook National University in Bukgu Daegu. At similar sites nearby, archaeologists have unearthed large quantities of cetacean bones — a sure sign whales were an important food source for populations in the area.

Watching. Whale Whale. Watching

The news story below shows us how difficult it has become to protect anything. First, it gives a typically hopeless example of human commerce destroying the oceans. But then it offers a potentially hopeful new development (whalewatching) which may eventually play a part to help protect the oceans.

But then another twist: because this new hopeful distraction also displays how incredibly self-centered *homo economicus* can be. Ultimately, the reporter is concluding that the main reason we need to save the fish and the squid is to save whale watching. We, he, me, they, us, you, still show little perception to leave things alone on nature’s own behalf.

—the Editor

New Zealand, April 5, 2004

Kaikoura’s whalewatching tourist industry may be threatened by overfishing of the species that whales eat. Squid expert Dr Steve O’Shea says studies of the contents of sperm whales’ stomachs show fish species such as groper and ling have declined from 37% of the whales’ diet in the 1960s to virtually zero today. Instead, sperm whales stranded on New Zealand beaches in recent years have fed almost exclusively on squid.

He says squid populations are now threatened as each sperm whale eats 800 to 1000 squid a day, and trawlers’ nets increasingly disturb the squid’s deepwater habitat. “Squid are often the first to go. If the whales are eating the squid, what’s going to happen to the whales?” he asked. “I think we will see further shifts which could force the whales to move away, with implications for Kaikoura.” Whalewatching at Kaikoura has become one of New Zealand’s biggest tourist drawcards, attracting more than 80,000 visitors a year.

Trawlers fishing for other species were catching squid in their nets and destroying both their habitat and their eggs. “Trawl nets are wiping out everything, modifying the environment to such an extent that the squid move on.”

Dr. O’Shea said New Zealand had more reported whale strandings than any other country, and the Conservation Department sent him the contents of the whales’ stomachs. “I have personally been inside the stomachs of more dead whales than I care to remember.” He has found hundreds of squid beaks and other signs of squid — but no fish.

Conservation officer Barry Weeber said, “Almost everywhere else in the world, if you sample the amount of fish eaten by sperm whales, it’s mostly squid,” he said. It was still too soon to expect a big recovery in sperm whale numbers since whaling ended in 1964 because the females live an average of 60 to 70 years, and take seven to 13 years to reach sexual maturity, and generally wait three to six years between births.

Interspecies Armor

Envisioning a pod of bottlenose dolphins feeding, we might think of them corralling a school of fish, or trapping them with their bodies against the shore. But a pod off western Australia does something completely unexpected. Before a hunt, they spear sea sponges with their pointed beaks, Then they root around in rocky crevasses where fish are hiding and scare them out for easy snaring. The living sponges serve as interspecies armor—if you will—protecting the vulnerable faces from the sharp rocks. This custom of proboscis padding has persisted for generations.

Biologists used to call such behavior a clever animal trick. Now they interpret such group-specific customs as *culture*. Biologists define culture as any behavior invented by one or a few animals in a group and taught to contemporaries and descendants, A cultural behavior is always local, and not practiced by other populations of the same species. If every bottlenose dolphin used sponges to catch, biologists would be more likely to call it instinctive behavior.

After a century of insisting that only humans purvey culture, scientists are now recognizing that many species possess culture. "Nonhuman culture is currently one of the hottest areas in the study of animal behavior," primatologist Frans de Waal of Emory University, Atlanta, writes in the journal PLoS Biology. One group of humpback whales in the Gulf of Maine has for generations engaged in a water-smacking custom, pounding the waves with their huge tails to confuse prey.

It should be no surprise that chimpanzees are among the most cultured animals. The chimps of the Ivory Coast's Tai Forest — and no others — mash parasites against their forearms and remove bone marrow from monkeys they've hunted. Only the chimps at Tai and at Boussou, Guinea, carefully choose flat stones on which to crack rock-hard nuts with hunks of wood. Only chimps from Mahale and Gombe in Tanzania, and at Kibale in Uganda perform rain dances, dragging branches along the ground during a downpour and slapping the ground with them. Only at Boussou do chimps spread leaves to sit on when the ground is wet. And only in Sierra Leone do they cover the thorns of the kapok tree with smooth sticks so they can scramble around the treetops, gathering fruit, without getting pricked.

Baboons tend to be fierce and aggressive, and the "Forest Troop" in Kenya's Masai Mara Reserve fits the mold. Males fight almost constantly. But in 1982, the most aggressive males began raiding the garbage at a nearby tourist lodge, gorging on rotten meat. Almost half of the troop's males, and *all* the aggressive individuals, died of tuberculosis.

Stanford University biologist Robert Sapolsky described the remaining males as, "a cohort of atypically non-aggressive survivors." When he and his colleague and wife, Lisa Share, returned to the troop in 1993, they found a peaceable kingdom. The males tolerated their social inferiors and groomed females more often than ever before. They did not harass females and subordinates.

The reason had nothing to do with the non-aggressive survivors the TB epidemic, because there weren't any. Because males leave their natal troop at adolescence, the 1990s males didn't include any offspring of the peaceful dads. Although young males joining the troop at first threatened their new neighbors, they picked up the local female-motivated customs quickly. "To anyone who believes that behavior is hard-wired by evolution," says Prof. Sapolsky, "this finding is problematic. It seems like there is not one best or most adaptive way to behave."

Biologist Hal Whitehead of Dalhousie University, Halifax, Canada believes that "by looking at culture in nonhuman animals, we may be able to learn a fair bit about genes and behavior." It is all the fashion to assert that genes have behavior on a short leash, but even something as seemingly innate as aggression in baboons can change if conditions are right. Aggression, and other behaviors long believed to be innate, may arise from cultural influences. "Even the fiercest primates do not forever need to stay this way," notes Prof. de Waal. Does that include humans?

Interspecies News

Interspecies.com recently received two grants to take us through the end of 2004.

The first one, an award from ICERC-Japan and Casio Inc. will be used to develop a program for the 2005 EXPO, to be held in Taichi Japan. Interspecies has just been commissioned to design and implement an exhibit that will allow visitors to experience whale and dolphin sounds through digital musical composition. With a projected 15 million visitors, our participation at EXPO offers a splendid opportunity to help the Japanese visitors appreciate whales in a new and unexpected way.

The second one, an operating grant from The Tides Foundation, arrives at a critical moment when

our future seemed a bit murkier than usual.

On other fronts, *The Belly of the Whale Project*, a collaboration of Interspecies.com and Greenmuseum.org, now has 21 submissions from musical composers representing eight countries. We expect to receive four or five more submissions over the next month.

Interspecies director, Jim Nollman is now beginning to do public presentations of this music created entirely from whale and dolphin calls. If you would like to see, and especially hear a one hour presentation of our work in general, and of this project in particular, we are now taking bookings for next fall and winter. Email us at beluga@interspecies.com for more info.

Sam Bower of Greenmuseum has written a few grant proposals to release the best of this music as a commercial CD. We will have a report about the success or failure of our proposal in the next Interspecies Newsletter. We also have plans to upload the music onto a website where it can heard as streaming audio.

Some of this music is now being used as the inspiration for a few music videos.

One of these music videos is now available as one part of an Interspecies DVD. At this point, we're simply burning copies in our office as people ask for it. You can buy it from us for $20.

Dog Comprehension

A border collie named Rico understands more than 200 words. He learns new words as quickly as many children. Researchers found that Rico knows the names of dozens of play toys and can find the one called for by his owner. That is a vocabulary about the same size as apes, dolphins and parrots trained to understand words, the researchers say.

The researchers have concluded that Rico has a language comprehension level equivalent to that of a human 3-year-old.

Rico's owner said, "I thank the researchers who have proven that people who talk to their dogs are cutting-edge communicators, not just a bunch of eccentrics."

Rico was born in December 1994 and lives with his owners in a German town, and thus understands German. He was tested at home.

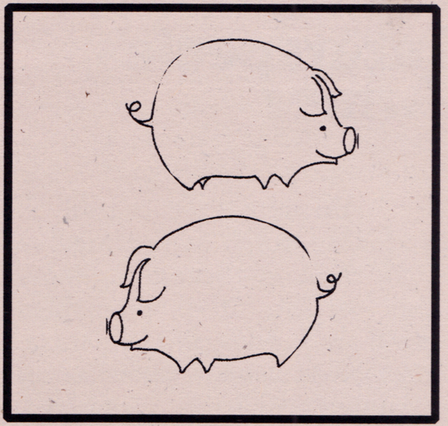
Rico can even figure out what a new word means. The researchers put several known toys in a room along with one that Rico had not seen before. From a different room, Rico's owner asked him to fetch a toy, using a name for the toy the dog had never heard. The border collie, a breed known primarily for its herding ability, was able to go to the room with the toys and, seven times out of 10, bring back the one he had not seen before.

The dog knew the names of all the other toys, and apparently concluded that the new one must be the one with the unfamiliar name. A month later, he still remembered the name of that new toy, even without having seen it since that first test.

"We think he was able to link the word to the item based on exclusion learning, either because he knew that the familiar items already had names or because they were not novel," said the researchers, led by Julia Fischer of the Max Planck Institute for Evolutionary Anthropology in Leipzig.

Fischer and her colleagues are still working with Rico to see if he can understand requests to put toys in boxes or to bring them to certain people.

Rico's learning ability may indicate that some parts of speech comprehension developed separately from human speech, the scientists said. "You don't have to be able to talk to understand a lot," Fischer said. The team noted that dogs have evolved with humans and have been selected for their ability to respond to the communications of people. This ability suggests that the brain structures that support this kind of learning are not unique to humans and may have formed the evolutionary basis of some of the advanced language abilities of humans."



Paul Bloom of Yale University calls for further experiments to answer several questions: Can Rico learn a word for something other than a small object to be fetched? Can he display knowledge of a word in some way other than fetching? Can he follow an instruction not to fetch something?

Three C's: Culture, Conservation, Cetaceans

I sometimes suffer a cognitive dissonance while reading supposedly groundbreaking news from the cool-cool world where scientist's research whales and dolphins. Is there anyone out there *besides* whalers and scientists who still harbor suspicions that cetaceans do *not* have culture? Let's hope this new paper on the subject convinces a few more of the dangerous plodders among us

—*editor*

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Culture and conservation of non-humans with reference to whales and dolphins

by Hal Whitehead, Luke Rendell, Richard W. Osborne, Bernd Wursig

Abstract

There is increasing evidence that culture is an important determinant of behavior in some non-human species including great apes and cetaceans. In some cases, there may be repercussions for population biology and conservation. Rapidly evolving "horizontal" cultures, transmitted largely within generations, may help animals deal with anthropogenic change and even allow them to exploit it, sometimes with negative consequences for both the animals and humans.

In contrast, stable "vertical" or "oblique" cultures, transmitted principally between generations, may impede adaptation to environmental change, and confound range recovery, reintroductions and translocations. Conformist stable cultures can lead to maladaptive behavior, which may be mistaken for the results of anthropogenic threats. They can also structure populations into sympatric sub-populations with distinctive cultural variants.

Such structuring is common among cetaceans, among which sympatric sub-populations may face different anthropogenic threats or respond to the same threat in different ways. We suggest that non-human culture should be integrated into conservation biology when considering populations with such attributes, and also more generally by refining definitions of evolutionarily significant units and considering how cultural attributes may change our perspectives of non-humans.

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Suppressing Dolphin Studies

Unfortunately, the dangerous plodders do not pay attention to science. Several recent reports conclude that the Bush adminstration has repackaged an idea from Stalinist Russia to favor "in-house" science to bolster policy, while ignoring independent research. The strategy is proving deadly to dolphins by redefining the labelling regulation known as "dolphin safe tuna."

—editor

Two former government scientists charged this week that superiors at their federally financed laboratory shut down their research because it clashed with policy goals of the Clinton and Bush administrations.

The scientists, who worked at different times over the past decade at the Southwest Fisheries Science Center in San Diego, said their research indicated that the practice of chasing and encircling dolphins to catch tuna exposed the dolphins to dangerous amounts of stress.

The accusations, by Dr. Albert Myrick, a wildlife biologist, and Dr. Sarka Southern, a research associate, came days after the Bush administration relaxed the criteria for declaring tuna netted by Mexican and other foreign fishing boats to be "dolphin safe." Commerce Secretary Donald L. Evans said that chasing and corralling dolphins and the tuna that often accompany them into purse nets had "no significant adverse impact" on the dolphins.

The ruling cleared the way for Mexican and other Latin American tuna producers to place a dolphin-safe label on cans for American shelves. The foreign producers seek the designation—which many consumers demand—to be competitive with American companies, which do not chase dolphins to catch tuna.

But this week, Dr. Myrick said he decided in 1995 to retire from the center, which is part of the Commerce Department's National Oceanic and Atmospheric Administration, after he was forbidden to continue his stress research. Dr. Southern, who helped pioneer the search for a molecular signature of stress, said that last year she was ordered to curtail her work after discovering signs of chronic stress in a large number of dolphins.

For a decade, administration officials have sought to grant Mexico the dolphin-safe designation, as that government has taken steps to reduce dolphin kills.

Scientists studying dolphins in the waters off the coasts of Mexico and Central America have struggled to understand why the populations have failed to regenerate, even as mortality rates have sharply fallen, from hundreds of thousands a year to fewer than 3,000. A leading theory is that stress caused by the chase and netting— or the separation of cows from calves —has disrupted the dolphins' ability to reproduce.

In 1997, Congress ordered NOAA and the fisheries center to prepare a study to determine if the purse net fishing was harmful. A top official at the agency, William T. Hogarth, said the study, which was released last week, was "not conclusive."

Officials at NOAA and the Commerce Department said there had been no effort to suppress research. The officials said that in the case of both scientists financing shortfalls and problems with peer reviews, not political considerations, ended their work. "We suppressed no research," said Dr. Michael Tillman, the director of the fisheries center.

Senator Barbara Boxer, Democrat of California, said she would call for hearings in the Senate Commerce Committee to determine whether the Bush administration was running roughshod over the scientific evidence or suppressing research. Ms. Boxer, who wrote the original 1990 legislation that set out criteria for dolphin-safe fishing, said she would introduce a bill on Thursday seeking to overturn Mr. Evans's ruling.